

CLAIMS

What is claimed is:

- 1 1. A method for routing a message to a function instance comprising the steps of:
2 receiving the message;
3 requesting a destination address for the function instance from a local repository;
4 whenever the destination address is local, sending the message to the function
5 instance;
6 whenever the destination address is remote, packaging the message with the
7 destination address and sending the packaged message to the function instance; and
8 whenever the destination address is not found, requesting the destination address for
9 the function instance from a remote repository, packaging the message with the requested
10 destination address and sending the packaged message to the function instance.
- 1 2. The method as recited in claim 1, wherein the step of sending the message to the
2 function instance comprises the step of sending the message to a queue for delivery of the
3 message to the function instance via a dispatcher.
- 1 3. The method as recited in claim 1, further comprising the step of storing the requested
2 destination address in the local repository whenever the destination address is not found.

1 4. The method as recited in claim 1, wherein the function instance includes a label and
2 the destination address is requested using the label.

1 5. The method as recited in claim 1, wherein the local repository and the remote
2 repository are look up tables.

1 6. The method as recited in claim 1, wherein the local repository and the remote
2 repository are databases.

1 7. The method as recited in claim 1, wherein the message is received from a local
2 function instance.

1 8. The method as recited in claim 1, the message is received from a remote function
2 instance.

1 9. A computer program embodied on a computer readable medium for routing a
2 message to a function instance comprising:

3 a code segment for receiving the message;

4 a code segment for requesting a destination address for the function instance from a
5 local repository;

6 whenever the destination address is local, a code segment for sending the message to
7 the function instance;

8 whenever the destination address is remote, a code segment for packaging the
9 message with the destination address and a code segment for sending the packaged message
10 to the function instance; and

11 whenever the destination address is not found, a code segment for requesting the
12 destination address for the function instance from a remote repository, a code segment for
13 packaging the message with the requested destination address and a code segment for
14 sending the packaged message to the function instance.

1 10. The computer program as recited in claim 9, wherein the code segment for sending
2 the message to the function instance comprises a code segment for sending the message to a
3 queue for delivery of the message to the function instance via a dispatcher.

1 11. The computer program as recited in claim 9, further comprising a code segment for
2 storing the requested destination address in the local repository whenever the destination
3 address is not found.

1 12. The computer program as recited in claim 9, wherein the function instance includes a
2 label and the destination address is requested using the label.

1 13. The computer program as recited in claim 9, wherein the local repository and the
2 remote repository are local look up tables.

1 14. The computer program as recited in claim 9, wherein the local repository and the
2 remote repository are databases.

1 15. The computer program as recited in claim 9, wherein the message is received from a
2 local function instance.

1 16. The computer program as recited in claim 9, the message is received from a remote
2 function instance.

- 1 17. An apparatus for routing a message to a function instance comprising:
2 a local repository;
3 a messaging agent communicably coupled to the local repository, the messaging
4 agent receiving the message, requesting a destination address for the function instance from
5 the local repository;
6 whenever the destination address is local, the messaging agent sending the message to
7 the function instance;
8 whenever the destination address is remote, the messaging agent packaging the
9 message with the destination address and sending the packaged message to the function
10 instance; and
11 whenever the destination address is not found, the messaging agent requesting the
12 destination address for the function instance from a remote repository, packaging the
13 message with the requested destination address and sending the packaged message to the
14 function instance.
- 1 18. The apparatus as recited in claim 17, further comprising:
2 a queue communicably coupled to the messaging agent;
3 a dispatcher communicably coupled to the queue; and
4 the messaging agent sending the message to the function instance by sending the
5 message to the queue for delivery of the message to the function instance via the dispatcher.

1 19. The apparatus as recited in claim 17, wherein the messaging agent further stores the
2 requested destination address in the local repository whenever the destination address is not
3 found.

1 20. The apparatus as recited in claim 17, wherein the function instance includes a label
2 and the destination address is requested using the label.

1 21. The apparatus as recited in claim 17, wherein the local repository and the remote
2 repository are local look up tables.

1 22. The apparatus as recited in claim 17, wherein the local repository and the remote
2 repository are databases.

1 23. The apparatus as recited in claim 17, wherein the message is received from a local
2 function instance.

1 24. The apparatus as recited in claim 17, the message is received from a remote function
2 instance.

- 1 25. A system for routing a message to a function instance comprising:
- 2 a system label manager;
- 3 a system label repository communicably coupled to the system label manager;
- 4 one or more messaging agents communicably coupled to the system label manager;
- 5 a repository communicably coupled to each of the one or more messaging agents; and
- 6 each messaging agent capable of:
- 7 receiving the message,
- 8 requesting a destination address for the function instance from the repository,
- 9 whenever the destination address is local, sending the message to the function
- 10 instance,
- 11 whenever the destination address is remote, packaging the message with the
- 12 destination address and sending the packaged message to the function instance, and
- 13 whenever the destination address is not found, requesting the destination
- 14 address for the function instance from the system label manager, packaging the
- 15 message with the requested destination address and sending the packaged message to
- 16 the function instance.

1 26. The system as recited in claim 25, further comprising:
2 a queue communicably coupled to each messaging agent;
3 a dispatcher communicably coupled to the queue; and
4 the messaging agent sending the message to the function instance by sending the
5 message to the queue for delivery of the message to the function instance via the dispatcher.

1 27. The system as recited in claim 25, wherein the messaging agent further stores the
2 requested destination address in the repository whenever the destination address is not found.

1 28. The system as recited in claim 25, wherein the function instance includes a label and
2 the destination address is requested using the label.

1 29. The system as recited in claim 25, wherein the repository and the system label
2 repository are look up tables.

1 30. The system as recited in claim 25, wherein the repository and the system label
2 repository are databases.